**Amendments to the Claims**:

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of the Claims**:

Claims 1-10 (cancelled).

11. (Currently Amended) A method for transmitting data, comprising:

forming, according to a specifiable signature formation method, a first signature as a function of the data to be transmitted;

transmitting in messages the first signature together with the data;

forming a second signature according to the specifiable signature formation method as a function of the transmitted data;

comparing the first signature with the second signature;

inverting the data to be transmitted;

forming the first signature according to the specifiable signature formation method as a function of the data to be transmitted and of the inverted data;

~~trasmitting~~ transmitting the first signature and the data;

inverting the transmitted data;

forming the second signature ~~according~~ according to the specifiable signature

formation method as a function of the inverted transmitted data and the transmitted data; and

comparing the first signature with the second signature.

12. (Currently Amended) The method as recited in Claim 11, wherein:

at least one of the first signature and the ~~secondsignature~~ second signature is formed in a bit-~~parellel~~ parallel manner in accordance with a signature register having multiple inputs.

13. (Previously Presented) The method as recited in Claim 11, wherein:

at least one of the first signature and the second signature is formed over several messages.

14. (Previously Presented) The method as recited in Claim 13, wherein:

at least one of the first signature and the second signature is transmitted by being distributed over several messages.

15. (Currently Amended) The method as recited in Claim 11, wherein:

the data to be transmitted includes one of:

input data of a precision of one bit and that arrives at processing units in messages via data buses, and

calculation results that are redundantly generated in parallel on multiple computers, [[and]]

in order to check a match of the data only the corresponding signatures are transmitted.

16. (Previously Presented) The method as recited in Claim 11, wherein:

the method is used for checking a memory content of a memory area of one of a read-only memory, flash memory, and a read-write memory.

17. (Previously Presented) The method as recited in Claim 16, wherein:

the data of the memory content to be verified are inverted,

a first signature is formed according to the specifiable signature formation method as a function of the data to be verified and of the inverted data and is stored as a setpoint signature in the memory area of the one of the read-only memory, the flash memory, and the read-write memory,

in order to verify the transmitted data located in the memory area to be verified, the transmitted data is inverted, and

as a function of the inverted transmitted data and of the transmitted data, the second signature is formed according to the specifiable signature formation method and is compared with the setpoint signature.

18. (Currently Amended) The method as recited in Claim 11, wherein:

the method is carried out via a computer program executable on one of a computing unit and a control unit ~~eorrresponding~~ corresponding to a processing unit.

19. (Currently Amended) The method as recited in Claim 18, wherein:

the computer program is stored on a memory element including one of a random access read-write memory, a read-only memory, ~~anda~~ and a flash memory.

20. (Previously Presented) A control unit for a motor vehicle, comprising:

at least one processing unit; and

a memory element in which a computer program is stored that is executable on the at least one processing unit, wherein when the at least one processing unit executes the computer program the following are performed:

forming, according to a specifiable signature formation method, a first signature as a function of data to be transmitted;

transmitting in messages the first signature together with the data;

forming a second signature according to the specifiable signature formation method as a function of the transmitted data;

comparing the first signature with the second signature;

inverting the data to be transmitted;

forming the first signature according to the specifiable signature formation method as a function of the data to be transmitted and of the inverted data;

transmitting the first signature and the data;

inverting the transmitted data;

forming the second signature according to the specifiable signature formation method as a function of the inverted transmitted data and the transmitted data; and

comparing the first signature with the second signature.